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ABSTRACT

The study compared the results of group and individual training methods on the acquisition of a roll-on-deodorant self care skill by 16 profoundly retarded adults residing at a residential institution for the mentally retarded. The deodorant skill was divided into 11 teaching steps and an initial performance baseline was obtained for each subject. Ss were randomly assigned to either an individual or group treatment condition. In the group condition, one trainee with an assistant spent 30 minutes per day for 20 sessions with a group of four Ss. Each trainer also spent 20 minutes per day for 20 sessions teaching the same skill individually with four Ss. A performance baseline was obtained after every five sessions. The method of training was identical in the two conditions. The trainers used backward chaining; gave verbal, gestural, and physical prompts; and provided social and edible reinforcement. The assistant in the group condition helped maintain order and encouraged Ss to imitate the skill being taught. The data were analyzed in terms of effectiveness (i.e. did the Ss learn more in either the small group or individual training conditions?) and efficiency (i.e. did either the small group or individual training produce more learning per unit of teacher time?). The analysis of effectiveness revealed a higher, but statistically nonsignificant, average-step-learned measure for the group condition. However, when data were analyzed in terms of steps learned per hour of staff time, the group condition was significantly more efficient. (Author/SW)

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Group vs. Individual Training on a Self-help Skill with the Profoundly Retarded

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Abstract

The present study compared the results of group and individual training methods on the acquisition of a roll-on-deodorant skill. The subjects were 16 profoundly retarded adults residing at a residential institution for the mentally retarded. The deodorant skill was divided into 11 teaching steps and an initial performance baseline was obtained for each subject. The subjects were randomly assigned to either an individual (N=8) or group (N=8) treatment condition. In the group condition, one trainer with an assistant spent 30 minutes per day for 20 sessions with a group of four subjects. Each trainer also spent 20 minutes per day for 20 sessions teaching the same skill individually with four subjects. A performance baseline was obtained after every five sessions. The method of training was identical in the two conditions. The trainers used backward chaining; gave verbal, gestural, and physical prompts; and provided social and edible reinforcement. The assistant in the group condition helped maintain order and encouraged subjects to imitate the skill being taught. The data were analyzed in terms of effectiveness (i.e., did the subjects learn more in either the small-group or individual training conditions?) and efficiency (i.e., did either the small-group or individual training produce more learning per unit of teacher time?) The analysis of effectiveness revealed a higher, but statistically non-significant, average-step-learned measure for the group condition. However, when the data were analyzed in terms of steps learned per hour of staff time, the group condition was significantly more efficient. These results are in line with findings by Storm and Willis (1978) on an imitation task and Favell, Favell, and McGimsey (1978) on a word description task.

Group vs. Individual Training on a
Self-help Skill with the Profoundly Retarded

Since the late 1950's it has generally been accepted that the preferred method for training the severely and profoundly retarded is on an individual or one-to-one basis. Some professionals have regarded individualized training the only method for achieving optimal changes in behavior with this population (Gardner, 1971; Wagner & Sternlicht, 1975). In reviewing a number of journals over a two year period, Favell, Favell, & McGimsey (1978) found that in approximately nine out of every ten articles involving the training or modification of behavior in severe/profound populations, a one-to-one method was employed. Others (e.g., Fink and Sandall, 1980) have questioned the desirability of this approach in view of current educational trends which suggest that a more substantial portion of the handicapped individual's day should be spent in group settings. It is well documented that severely retarded individuals can benefit from small-group training on a variety of tasks (e.g., Newcomer & Morrison, 1974; Mansdorf, 1977; Fielding, 1972; Davis, 1969; Bigelow & Griffiths, 1972; Tobias & Cortazzo, 1963). However, there have only been a few

attempts to experimentally determine the effectiveness of small-group vs. one-to-one training in comparable situations. Liberman (1968) reviewed behavior modification programs in California and concluded that individual training was more effective, but group training was considerably more efficient. Storm & Willis (1978) found that small-group training was as effective as individual training for teaching imitative skills to profoundly retarded subjects. Favell, Favell, & McGimsey (1978) reported that a group of moderately retarded subjects acquired more skills in less teacher-time with group training on a word description task.

In addressing the pragmatic question relating to the use of limited staff time, group programming is perhaps an alternative to the individual method in situations where a large number of clients must be reached by a limited number of staff (Storm & Willis, 1978). In the majority of public facilities there are too few trained personnel to rely totally on one-to-one instruction. More efficient utilization of staff is progressively being mandated by shrinking budgets concomitant with increased service needs.

The purpose of this study was to compare the results of group and individual training methods on the acquisition of a self-help skill.

Method

Subjects

The subjects were 16 profoundly retarded (AAMD-ABS) individuals residing at a large public institution for the mentally retarded. They ranged in age from 16 to 29 years. Mean length of stay in the institution was 11 years. The 16 participants were randomly selected from a pool of 23 residents who met the following criteria: a) successfully passed three or fewer steps of an eleven step roll-on deodorant program during an individual baseline session b) had no serious sensory or physical handicap.

Procedure

The deodorant skill was divided into 11 teaching steps and an initial performance baseline was obtained for each subject. The subjects were randomly assigned to either an individual (N=8) or group (N=8) treatment condition. In the group condition, one trainer with an assistant spent 30 minutes per day for 20 sessions with a group of four subjects. Each trainer also spent 20 minutes per day for 20 sessions teaching the same skill individually with four subjects. Subjects in the small-group condition received an average of 12.5 trials per training session as compared to 14.5 trials per session for the individual condition. A performance baseline was obtained after

every five sessions. The method of training was similar in the two conditions. The trainers used backward chaining; gave verbal, gestural, and physical prompts; and provided social and edible reinforcement. The assistant in the group condition helped maintain order and encouraged residents to imitate the skill being taught.

Results

As shown in Figure one, the mean performance of the eight individuals who received small-group instruction was consistently better than those who received individual training.

Insert Figure 1 about here

At the end of 20 training sessions, the mean steps learned was 6.0 (range: 1 to 11) for the group condition and 5.0 (range: 1 to 11) for the individual condition. Two subjects in the individual condition completed all 11 steps of the task; in the group condition one subject completed the task and another completed ten steps. The only statistically significant effect was the number of steps learned across both groups ($F=40$, 1/12 df, $p<.01$). When the data were analyzed in terms of steps learned per hour of staff time, differences between the two training conditions were magnified. Subjects in the group training condition acquired

a mean of 1.1 steps per hour of staff time as opposed to .6 steps per hour in the individual condition. This difference approached significance ($F=2.7$, 1/12 df, $p < .13$).

A one year follow-up individual performance baseline was completed on 15 of the 16 subjects. The missing subject had completed the entire program. Seven of the 15 knew an equal or greater number of steps as at completion of the training one year earlier. Only four had forgotten more than one step. The mean number of steps forgotten was .8. There was no significant difference in steps retained between the group and individually trained subjects.

Discussion

Small-group programming obviously provides more interaction between trainers and clients than individual programming. In the situation described here, 60 minutes of staff time produced 120 minutes of interaction in the group condition and 80 minutes of staff time produced 80 minutes of interaction in the individual condition.

In addition, the results of this study indicated that both conditions produced significant learning outcomes, equal efficiency in terms of steps learned per unit of staff time, and substantial retention after one year. This finding is particularly relevant to situations where staff-resident ratios make equitable distribution of one-to-one training impossible. Small group programming

may be a viable instructional medium for some profoundly persons with some self-help skills that have traditionally been taught on an individual basis.

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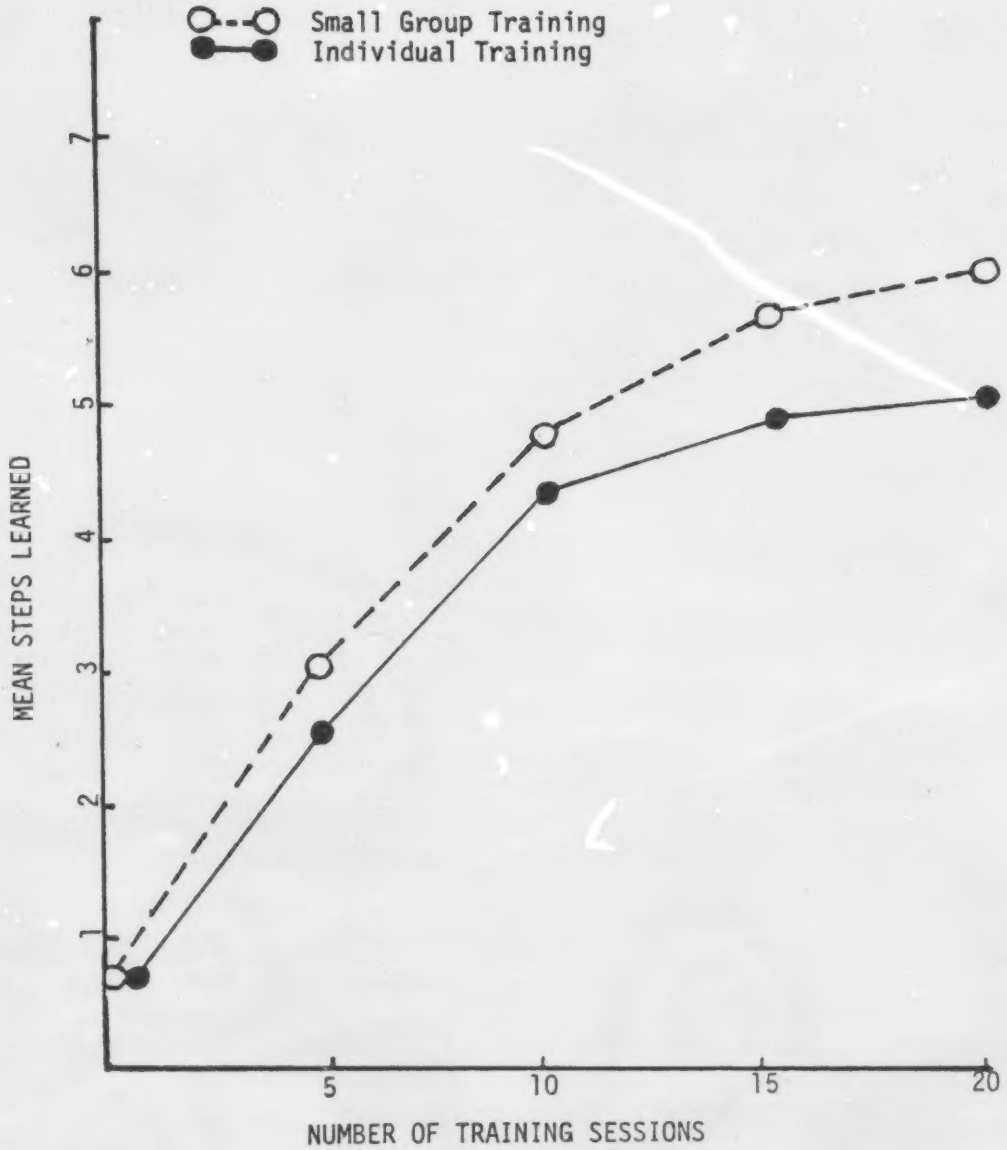
Footnote

We are indebted to Partlow State School and Hospital where the study was conducted and to Linda Bryars and Ernest Washington who served as primary trainers in the study.

Figure Caption

Figure 1. Acquisition of steps in small-group and individual instruction.


Small Group Training
Individual Training
MEAN STEPS LEARNED
1
2
3
4
5
6
7
5
10
15
20
NUMBER OF TRAINING SESSIONS